



# The IEEE Technology Center for Climate (ITCC) *in a nutshell*

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*March 2, 2024*

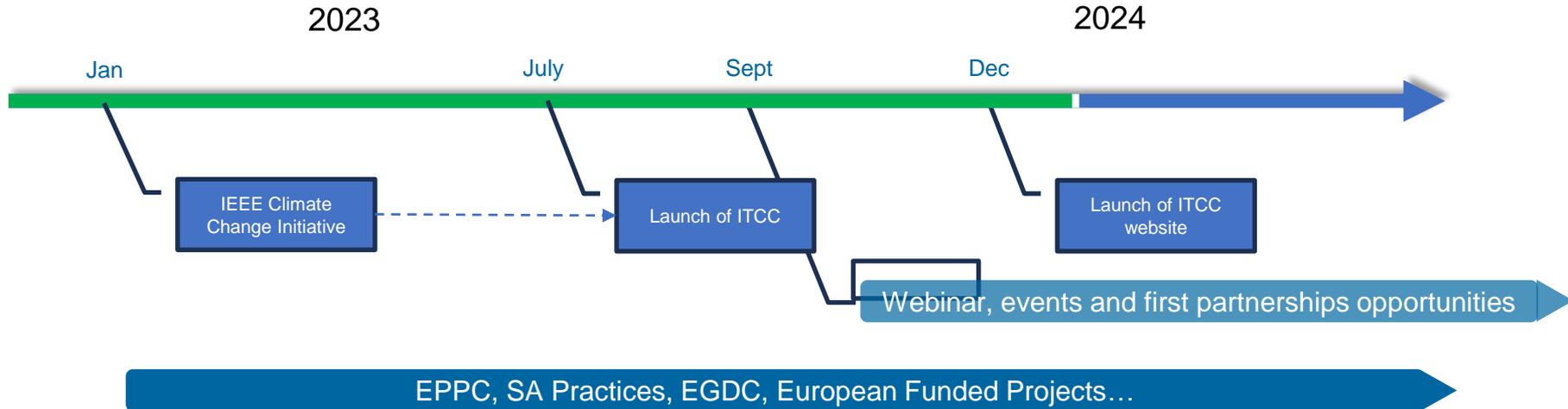
**IEEE TECHNOLOGY  
CENTER** *for Climate*



# IEEE Global Office in Vienna



# IEEE Technology Center for Climate (ITCC)



<https://itcc.ieee.org>



<https://www.linkedin.com/company/ieee-technology-center-for-climate>



# IEEE SA CENTERS OF COMPETENCE



## Connectivity & Telecom

- Rural
- Next generation telecom
- Wired and hybrid communications



## Energy

- Smart energy
- Energy efficiency
- Energy infrastructure



## Foundational Technologies

- Industrial IoT
- Consumer technology
- Infrastructure Application Technologies



## Health & Life Sciences

- Pharma
- Clinical health
- Wellness



## Mobility

- Safe autonomous driving
- Zero emissions
- MaaS



## New Frontiers & Emerging Spaces

- Cybersecurity
- Emerging technology areas



## Sustainability

- Sustainability & Design
- Measurement & Accountability
- Energy Transition

# European Public Policy efforts related to climate change

- Position “Smart Buildings”
- EC Expert Group on “Smart Readiness Indicator for Buildings”

- Position “ETS”
- EC Expert Group on Climate Change Policy – ETS 2

MEASURE THE TECHNOLOGICAL READINESS OF YOUR BUILDING



**RENEWABLE ENERGY SYSTEMS (RES) IN THE EU**  
Renewable Energy and Hydrogen

100 European Public Policy Recommendations

- 1. Invest in research and innovation in energy storage, smart grids, and digital technologies.
- 2. Foster scaling & energy system integration, among energy storage, smart grids, and digital technologies.
- 3. Develop skills, training, and education in the energy sector.
- 4. Strengthen resilience of different power grids, as international cooperation, renewable energy sources for energy storage, and smart grids.
- 5. Develop skills, training, and education in the energy sector.

Position on “RES”



How will the EU reduce its greenhouse gas emissions by at least

**55%**  
by 2030?



**GREEN HYDROGEN: WHAT IS IT GOOD FOR?**  
Finding its Role in a Low Carbon Future

Understanding the Transport Sector – Will Hydrogen be Efficient Enough?

The use of hydrogen for fuel cell vehicles has been shown to be much less efficient, and the use of hydrogen for combustion engines is even less efficient. Even heavy transport may appear to be having to be replaced by other low-carbon options. It may be replaced by other low-carbon options.

Mode	2020	2030	2040	2050
Trucks	10%	15%	20%	25%
Trains	10%	15%	20%	25%
Ships	10%	15%	20%	25%
Air	10%	15%	20%	25%
Sea	10%	15%	20%	25%
Aviation	10%	15%	20%	25%
Maritime	10%	15%	20%	25%
Aviation	10%	15%	20%	25%
Maritime	10%	15%	20%	25%

100% Green Hydrogen Production Costs (€/kg)

100% Green Hydrogen Production Costs (€/kg)

- Position on “Green Hydrogen”
- Video “Green Hydrogen”
- Position on “E-mobility: smart charging”



- Position on “Smart and Sustainable Ports”
- IEEE-SA ICP on Sustainable Maritime



# ITCC Aims

## *Innovation, Collaboration, Sustainability*

- ▶ **Role of IEEE in climate discussions:** IEEE global membership and technical expertise.
- ▶ **Role of ITCC: a link between IEEE and relevant external stakeholders**, through three key pillars:

1



### **Technology Insight through our Knowledge Collaborative**

...**exchange of knowledge**, ideas, and best practices related to technology for climate change and **facilitate listening and learning opportunities**...

2



### **Collaboration and Partnership**

...**interdisciplinary collaboration** among industry, policy makers, academia and other leading institutions...

3



### **Informing Policies through Vetted Technical Expertise**

...engage with policy makers and regulatory bodies to provide **technical expertise and insights** into the development and implementation of climate policies...



# Where We Connect

## Projects and Meetings

### EU Meetings



**2023 IEEE President and CEO Saifur Rahman** in meetings: **EU Green Week** on June 8 and **European Sustainable Energy Week (EUSEW)** on June 20, 2023.

### IRENA



**IEEE Young Professionals** at the **IRENA Innovation Week** participate in the Youth & Innovators Hub to highlight the importance of collaboration and innovation for a sustainable future.

### In Video



How the next generation can take up the baton of climate sustainability

**IEEE Young Professionals** video at **IRENA** event on the importance of collaboration.



# Where We Connect

## *Projects and Meetings*

### Digital Product Passport



Workshop with the **UN Industrial Development Organization, European Commission, Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK)** and the industry association **Industrie 4.0 Austria** on the technical aspects of circular economy and **Digital Product Passport**.

### EU Meetings...



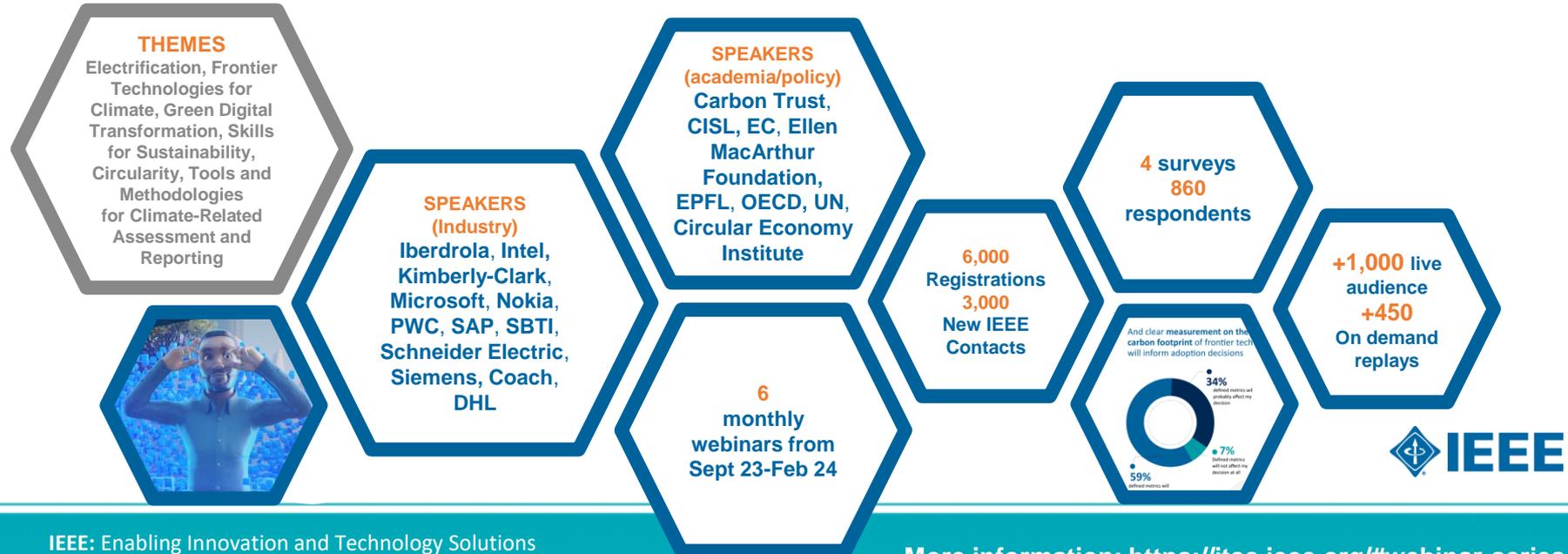
**EGDC Members and Partners** Meeting in Brussels to discuss **draft guidelines** to estimate the **net environmental impact of digital solutions** and the **next phase** of the European Green Digital Coalition.



# Webinar Series with Reuters

## *Empowering the Green Tech Revolution: From Design to Deployment*

In line with its **pillars**, ITCC launched a series of events in cooperation with Reuters Events Sustainable Business. Our webinar series explored an **initial set of 6 themes** and explored how **technology contributes to climate goals and sustainability**....



## The Practical and Scalable Implementation of a Circular Economy

POST EVENT REPORT | January 24



Helger Berg

Vice Director of the Circular Economy Institute  
Wuppertal Institute for Climate, Environment and Energy

Natalia Lopez

Senior Manager - Sustainable Supply Chain, Circular Economy  
PwC

Matthew Magrini

Senior policy analyst  
Ellen MacArthur Foundation

Kim Menauskas

Director of sustainability  
Coach



Malke Lulken

IEEE PlanetPositive 2030 Chair  
IEEE



Moderator:

Dr. David Greenfield  
Vice President  
Circular Economy Institute EEB

### ATTENDEE INFORMATION

<b>2045</b>	<b>805</b>	<b>1099</b>	<b>1145</b>
Total Registered Attendees	Total Live Listeners	Total Opt-Ins	Corporate Attendees

### TOP 6 ATTENDEES

- Head of ESG, Treasury & Trade Solutions, Citi
- VP ESG, Deutsche Bank
- VP Global Sourcing, Kraft Heinz
- Head of ESG, Sanfills
- Principal, BSI Professional Services
- Director Sustainable Sourcing, L'Oréal

### SENIORITY SPLIT



### SPONSOR SPECIFIC RESULTS

**74**

Number of Questions

# ITCC Website

The screenshot shows the ITCC website homepage. At the top, there is a navigation bar with the IEEE logo and links for 'About', 'Themes', 'Partners', 'News', 'Blog', and 'Engage With Us'. Below the navigation bar is a main banner with the text 'Innovation, Collaboration, Sustainability.' and a video player showing a person working on a laptop. Below the banner is a 'Featured' section with a grid of six article cards. Each card includes a thumbnail image, a title, a date, and a 'Read More' link.

**Featured**

- EVENTS**  
[28 FEB] Tools and Methodologies for Climate-Related Assessment and Reporting – Register Now!  
9 FEBRUARY 2024  
Read More →
- NEWS**  
How does the transition to a circular economy impact industry and value chains?  
28 JANUARY 2024  
Read More →
- BLOG**  
Assessing the net impact of frontier technologies on climate: do the benefits outweigh the cost?  
ITCC / 19 DECEMBER 2023  
Read More →
- NEWS**  
What sustainability-related skills are needed for a successful green transformation?  
19 DECEMBER 2023
- NEWS**  
Green Hydrogen and its Role in a Low-Carbon Future (video)  
19 DECEMBER 2023
- BLOG**  
Electrifying the future: Challenges and solutions for scaling up clean energy  
ITCC / 1 DECEMBER 2023

## Theme Pages

The screenshot shows a theme page for 'Green Digital Transformation'. It features a large header image with a person working on a laptop. Below the header is a 'Featured' section with a card titled 'THE PROGRESS ON THE GREEN DIGITAL TRANSFORMATION'. The card includes a sub-header 'Empowering The Green Tech Revolution From Design to Delivery' and a main title 'The Progress on the Green Digital Transformation'. Below the card is a 'Read More' link.

## Surveys

The screenshot shows a survey titled 'The green and digital transformations can help address climate change challenges.' The survey is presented as a slide with a blue and green color scheme. The main text reads: 'The green and digital transformations can help address climate change challenges.' Below this, it says: 'Aligning these parallel strategies is increasingly important. Our survey results show that while there is progress, there is still some uncertainty.' The slide includes the IEEE logo and the text 'IEEE TECHNOLOGY CENTER for Climate'.

## Videos

The screenshot shows a video player with a blue and green color scheme. The video title is 'What key sustainability-related skills are needed for a successful green transformation? (ITCC Webinar Talking Points 30s)'. The video shows a person working on a laptop. Below the video player is a 'Read More' link.

## ITCC Blog

The screenshot shows a blog post titled 'Assessing the net impact of frontier technologies on climate: do the benefits outweigh the cost?'. The blog post features a large image of a person wearing a futuristic headset. Below the image is the text: 'Assessing the net impact of frontier technologies on climate: do the benefits outweigh the cost?' and 'ITCC / 19 DECEMBER 2023'. Below the text is a 'Read More' link.

## Engage!

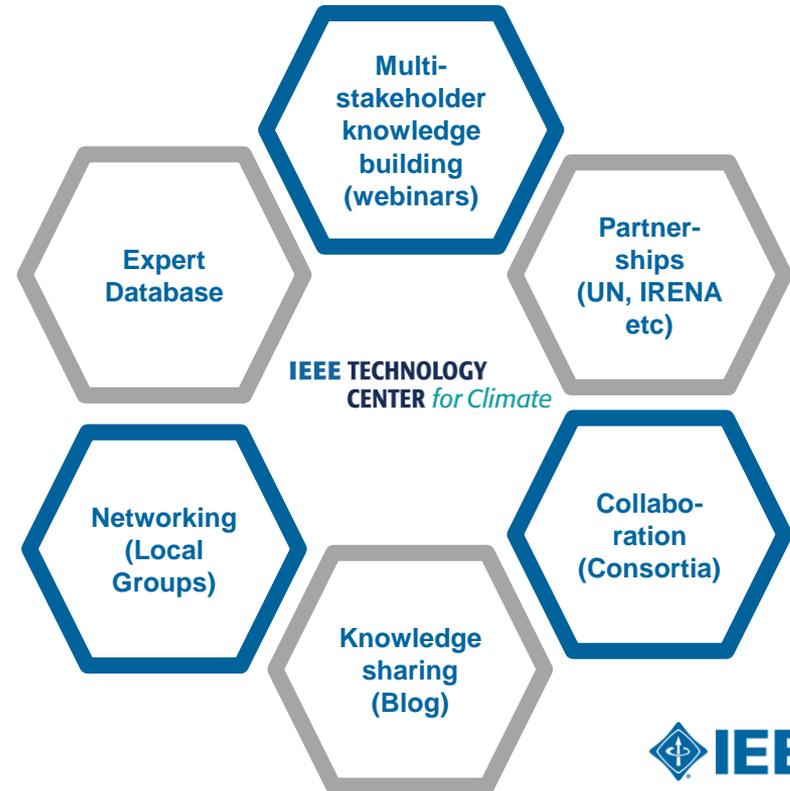
The screenshot shows the 'Engage with ITCC' page. It features a large QR code and the text: 'Engage with ITCC. There are several options you can select to engage with us. Based on your replies we will contact you shortly with further instructions.'



# ITCC – what's next

## *Opportunities to engage with us*

ITCC will now tap into this **wealth of knowledge** and explore collaboration opportunities including **partnerships, communities of practice (CoP)**, IEEE expert pooling and **sharing of expertise** with external partners.



**IEEE TECHNOLOGY**  
**CENTER** *for Climate*

Engage with us

[itcc.ieee.org](https://itcc.ieee.org)

[itcc@ieee.org](mailto:itcc@ieee.org)